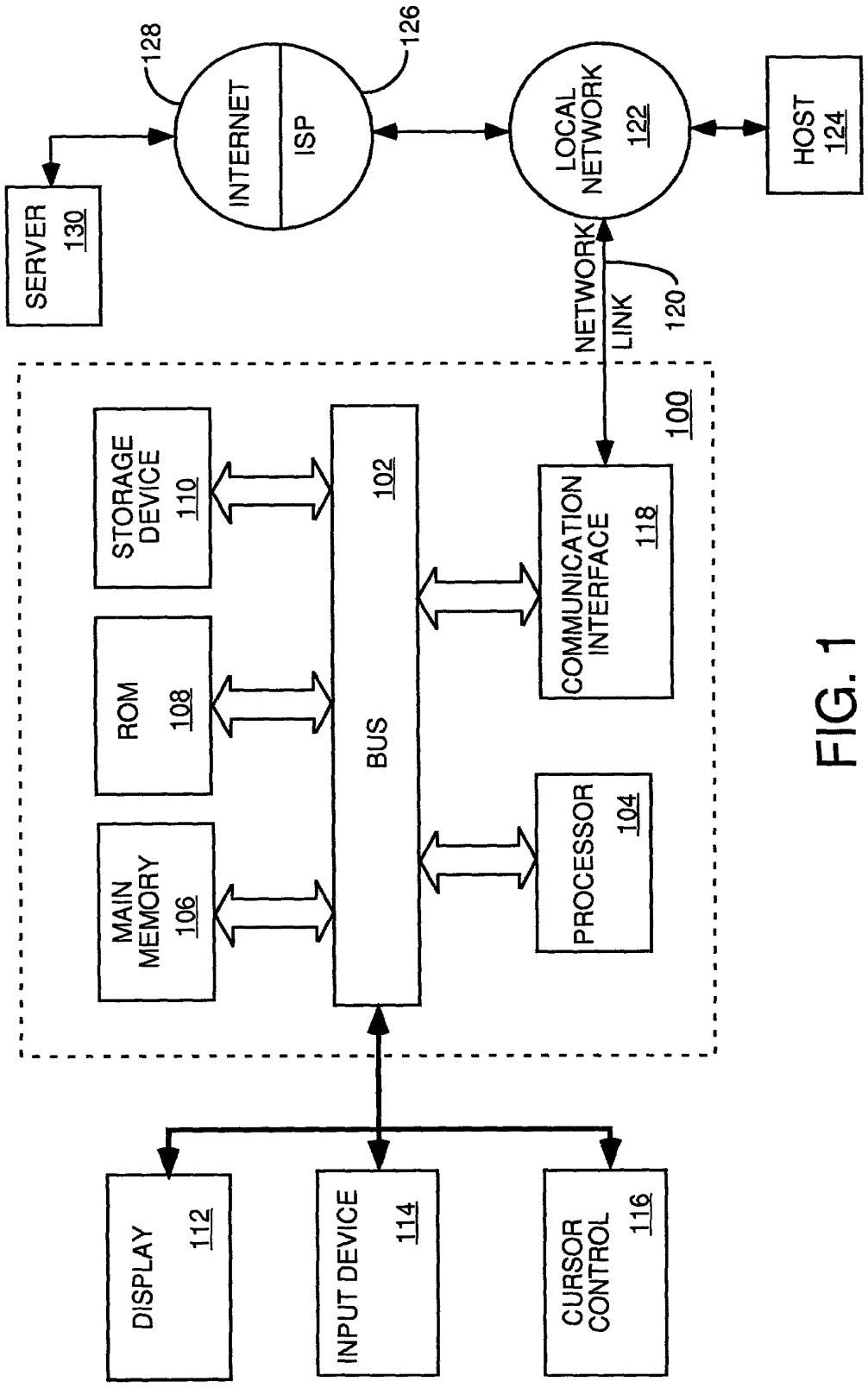

128
126
INTERNET
ISP
LOCAL NETWORK 122
HOST 124
SERVER 130
NETWORK LINK 120
100
STORAGE DEVICE 110
ROM 108
MAIN MEMORY 106
BUS 102
COMMUNICATION INTERFACE 118
PROCESSOR 104
DISPLAY 112
INPUT DEVICE 114
CURSOR CONTROL 116

FIG. 1

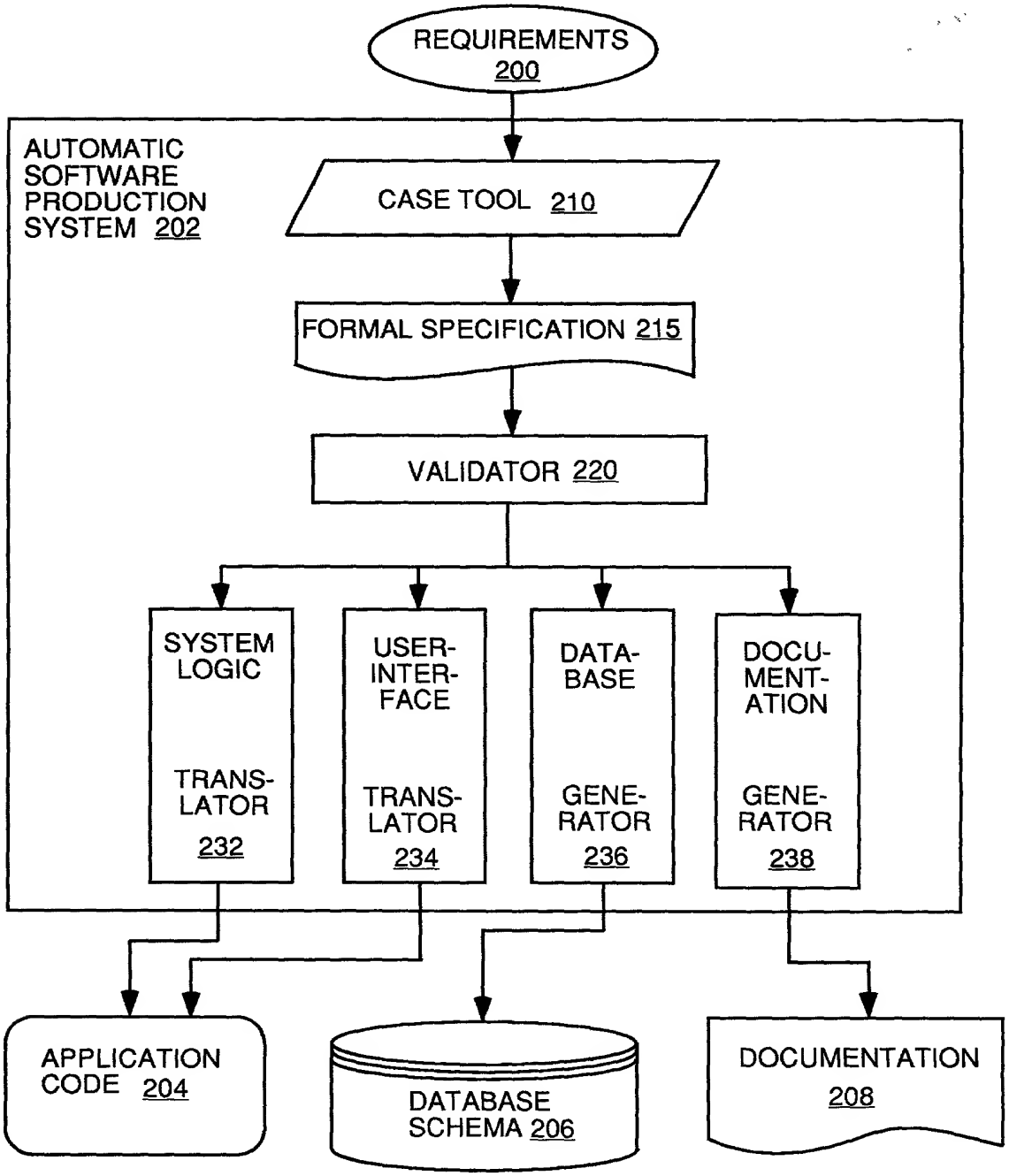

REQUIREMENTS
200
AUTOMATIC
SOFTWARE
PRODUCTION
SYSTEM 202
CASE TOOL 210
FORMAL SPECIFICATION 215
VALIDATOR 220
SYSTEM
LOGIC
TRANS-
LATOR
232
USER-
INTER-
FACE
TRANS-
LATOR
234
DATA-
BASE
GENE-
RATOR
236
DOCU-
MENT-
ATION
GENE-
RATOR
238
APPLICATION
CODE 204
DATABASE
SCHEMA 206
DOCUMENTATION
208

FIG. 2

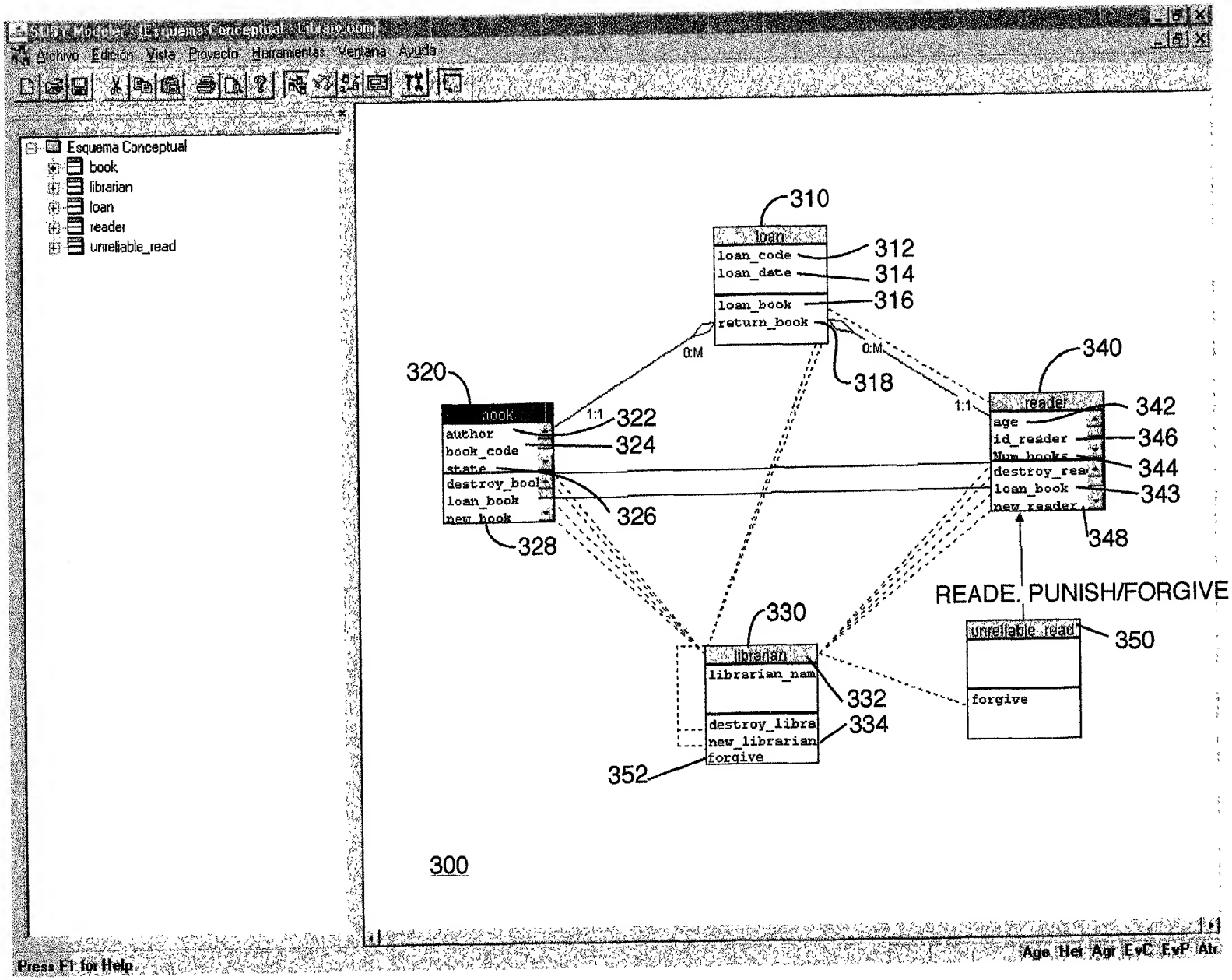

Esquema Conceptual
book
librarian
loan
reader
unreliable_read
310
loan
loan_code
loan_date
loan_book
return_book
312
314
316
318
0:M
0:M
320
book
author
book_code
state
destroy_bool
loan_book
new_book
1:1
322
324
326
328
1:1
340
reader
age
id_reader
Num_books
destroy_rea
loan_book
new_reader
342
346
344
343
348
READE. PUNISH/FORGIVE
330
librarian
librarian_nam
destroy_libra
new_librarian
forgive
332
334
352
unreliable_read
forgive
350
300
Press F1 for Help
Age Hei Agr EvC EvP Atr

FIG. 3

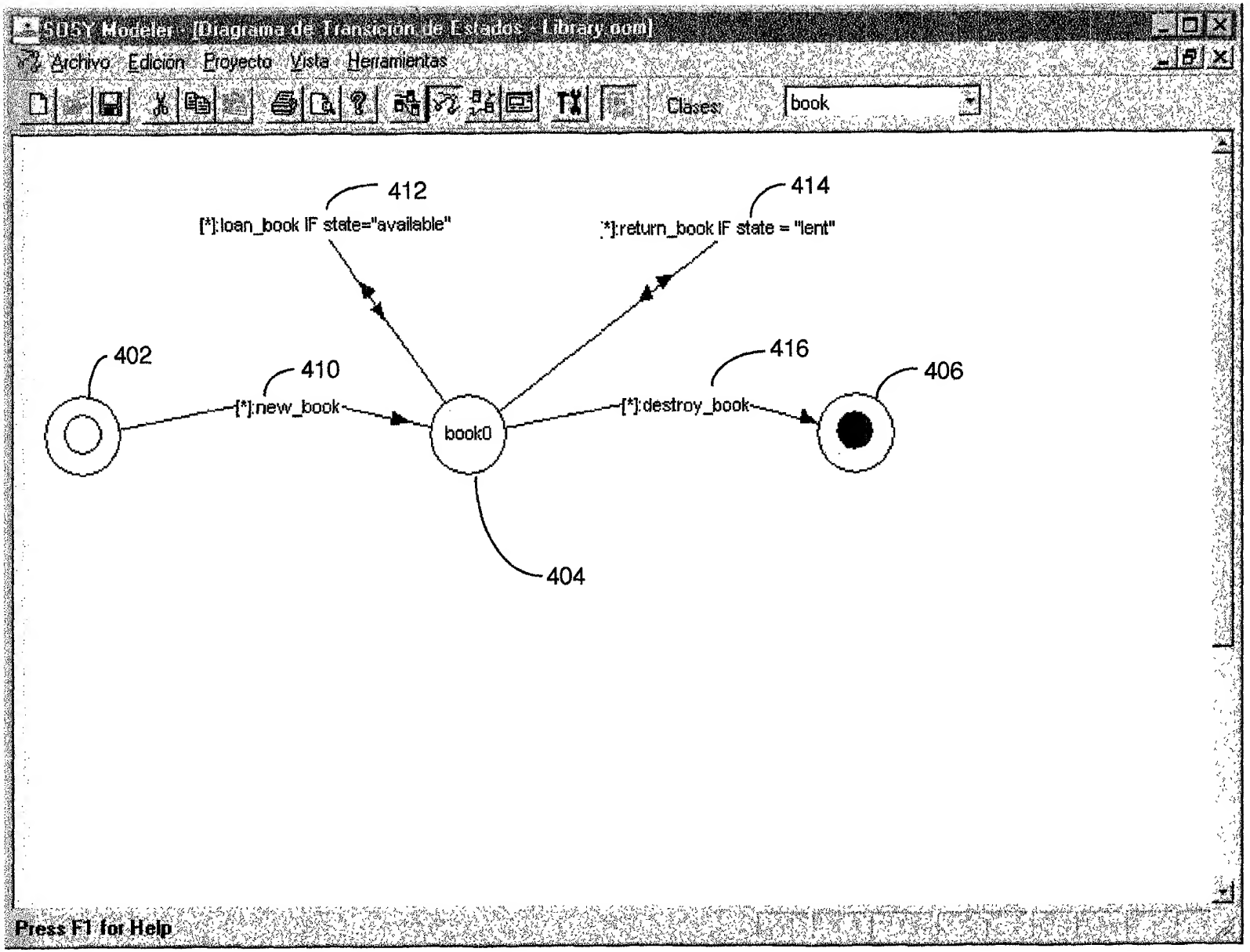

SDSY Modeler - [Diagrama de Transición de Estados - (library.pom)]
Archivo Edición Proyecto Vista Herramientas
Clases:
book
412
[*]:loan_book IF state="available"
414
[*]:return_book IF state = "lent"
402
410
[*]:new_book
book0
416
[*]:destroy_book
406
404
Press F1 for Help

FIG. 4A

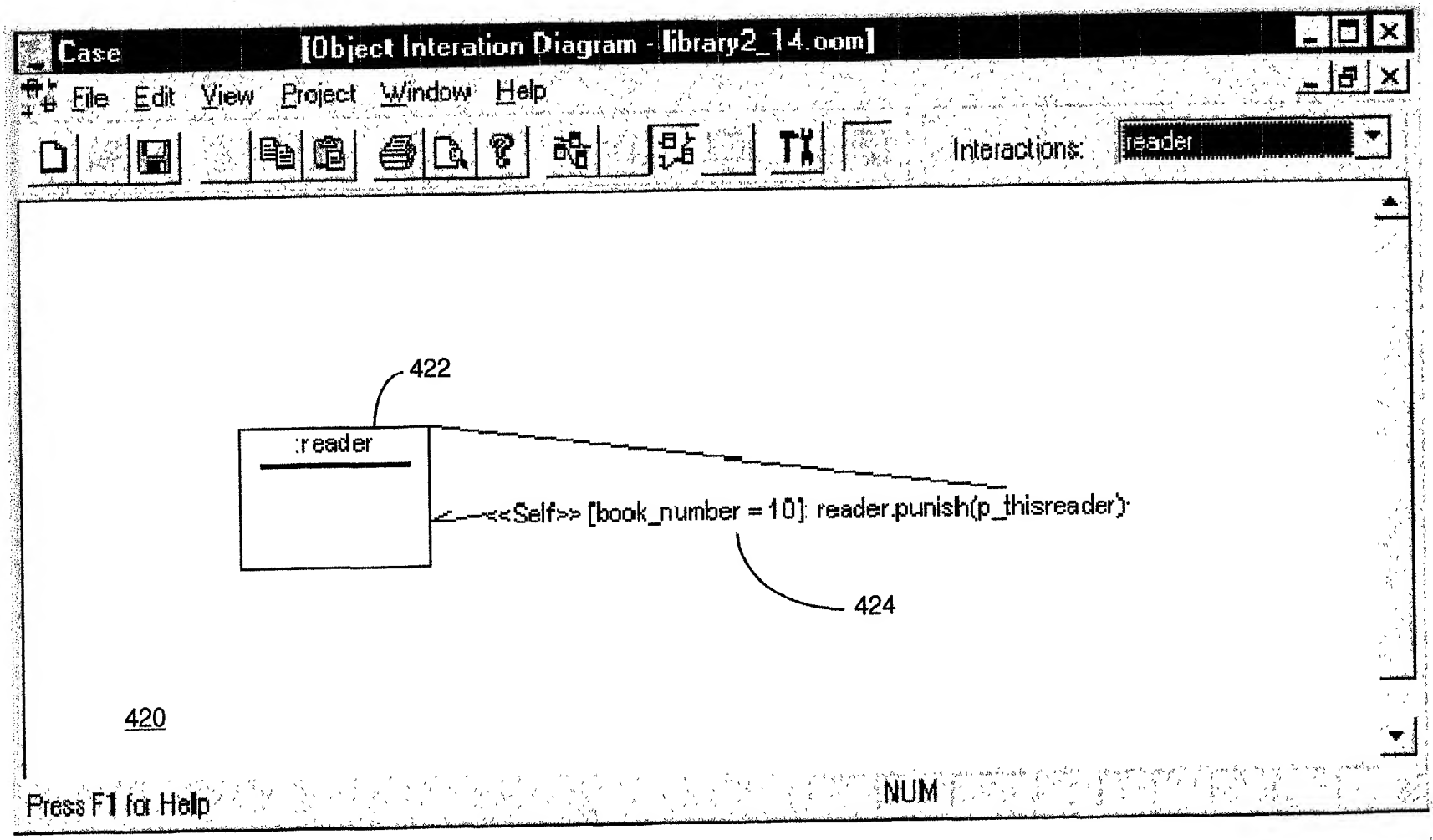


FIG. 4B

AUTOMATIC SOFTWARE PRODUCTION SYSTEM
INVENTOR: IBORRA AND PASTOR
SERIAL NO. 09/872,333
FILING DATE: 06/01/01
DOCKET NO. CHG-001.3P

AUTOMATIC SOFTWARE PRODUCTION SYSTEM
INVENTOR: IBORRA AND PASTOR
SERIAL NO. 09/872,333
FILING DATE: 06/01/01
DOCKET NO. CHG-001.3P

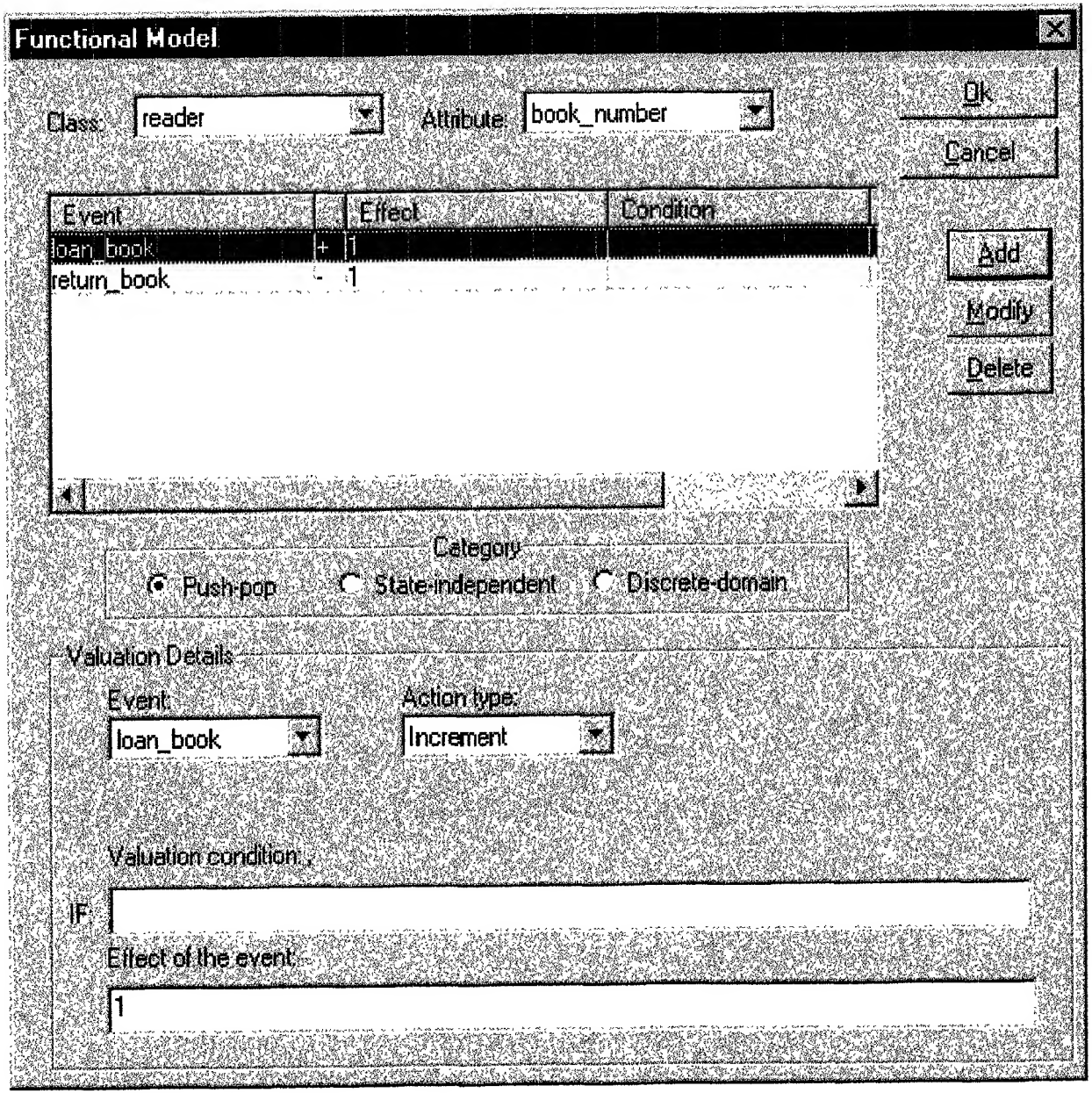


FIG. 5

FLOWCHART OF THE FUNCTIONS THAT ALL SPECIES OF SYSTEM LOGIC TRANSLATORS WILL PREFORM

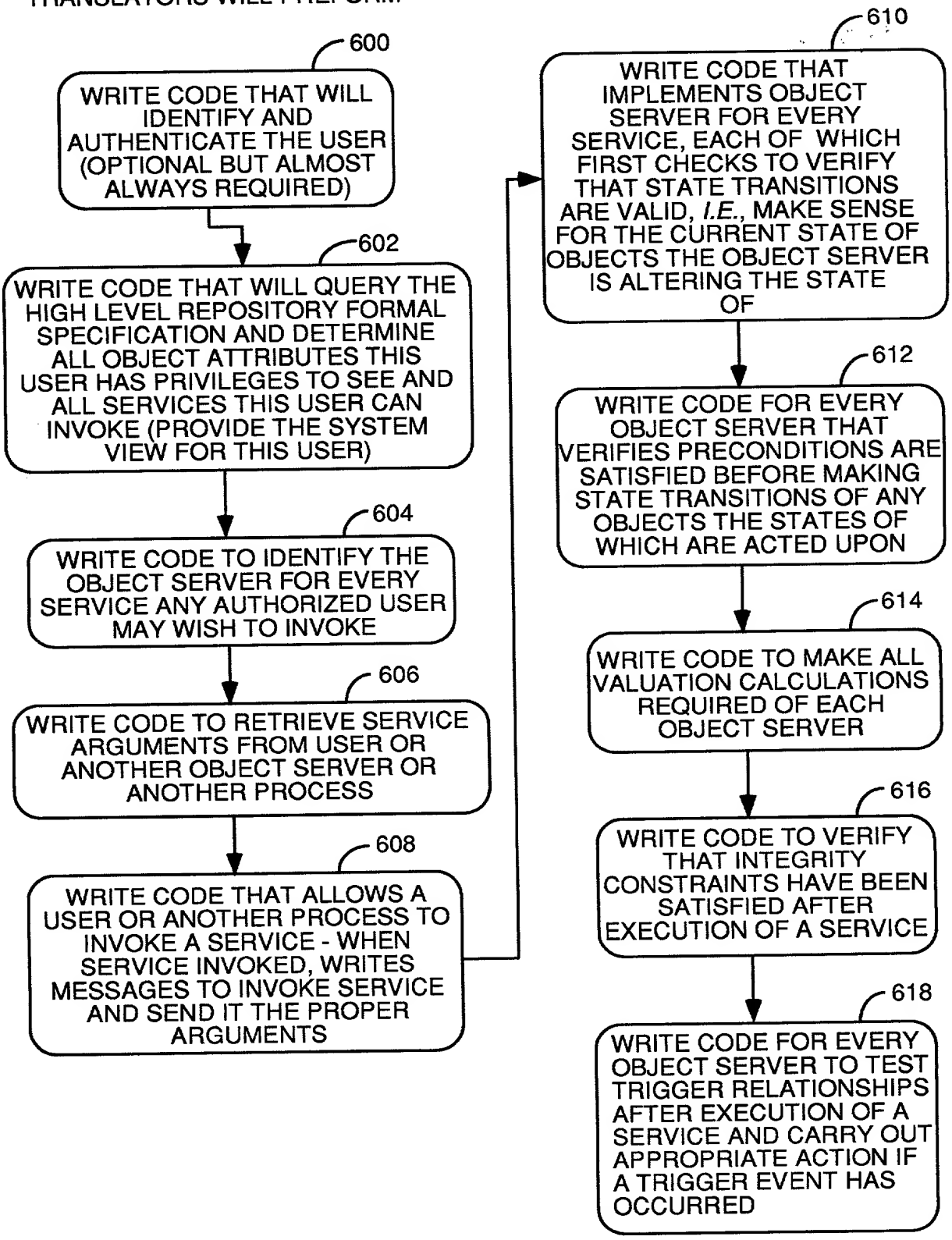


FIG. 6

FLOWCHART OF THE FUNCTIONS THAT ALL SPECIES IN THE USER INTERFACE TRANSLATOR SUBGENUS WILL PREFORM

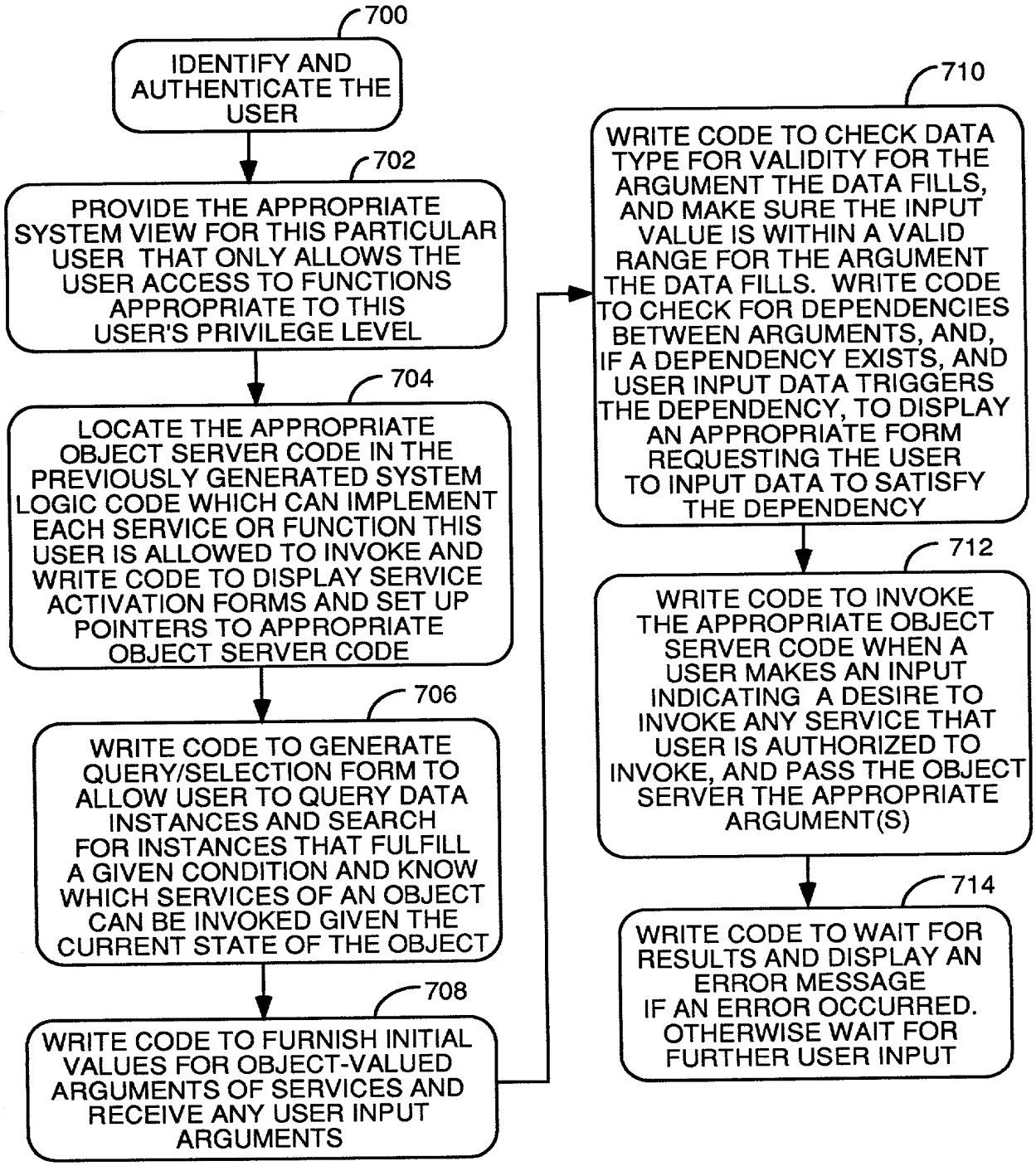


FIG. 7

FLOWCHART OF THE FUNCTIONS THAT ALL SPECIES IN THE DATABASE GENERATOR TRANSLATOR SUBGENUS WILL PERFORM

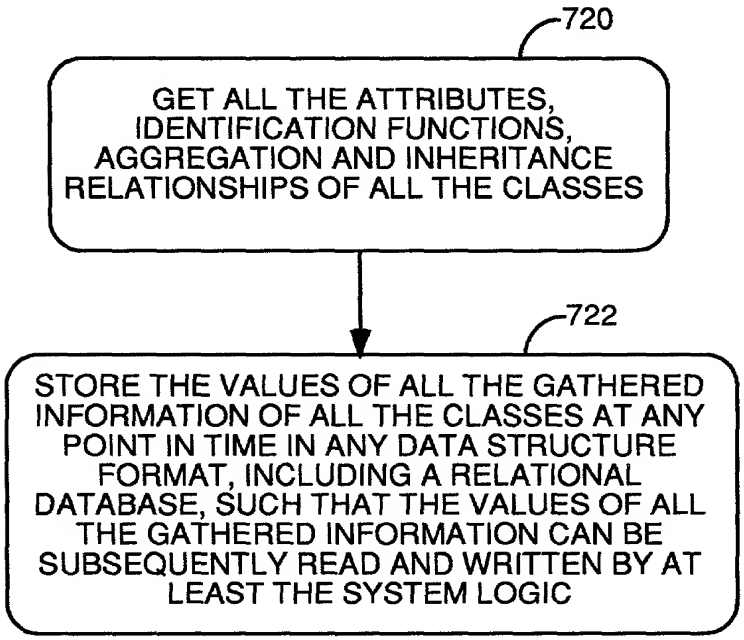
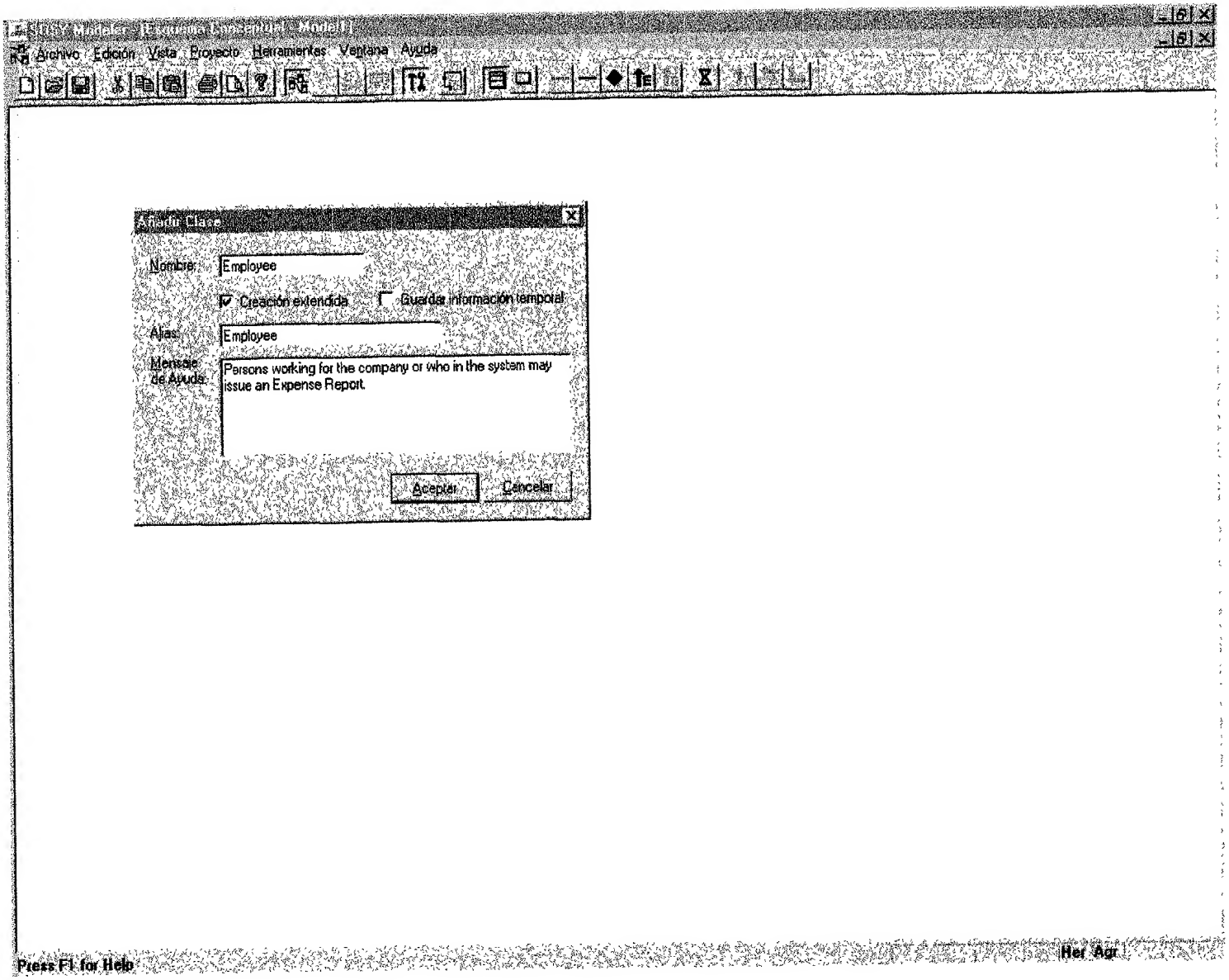


FIG. 8

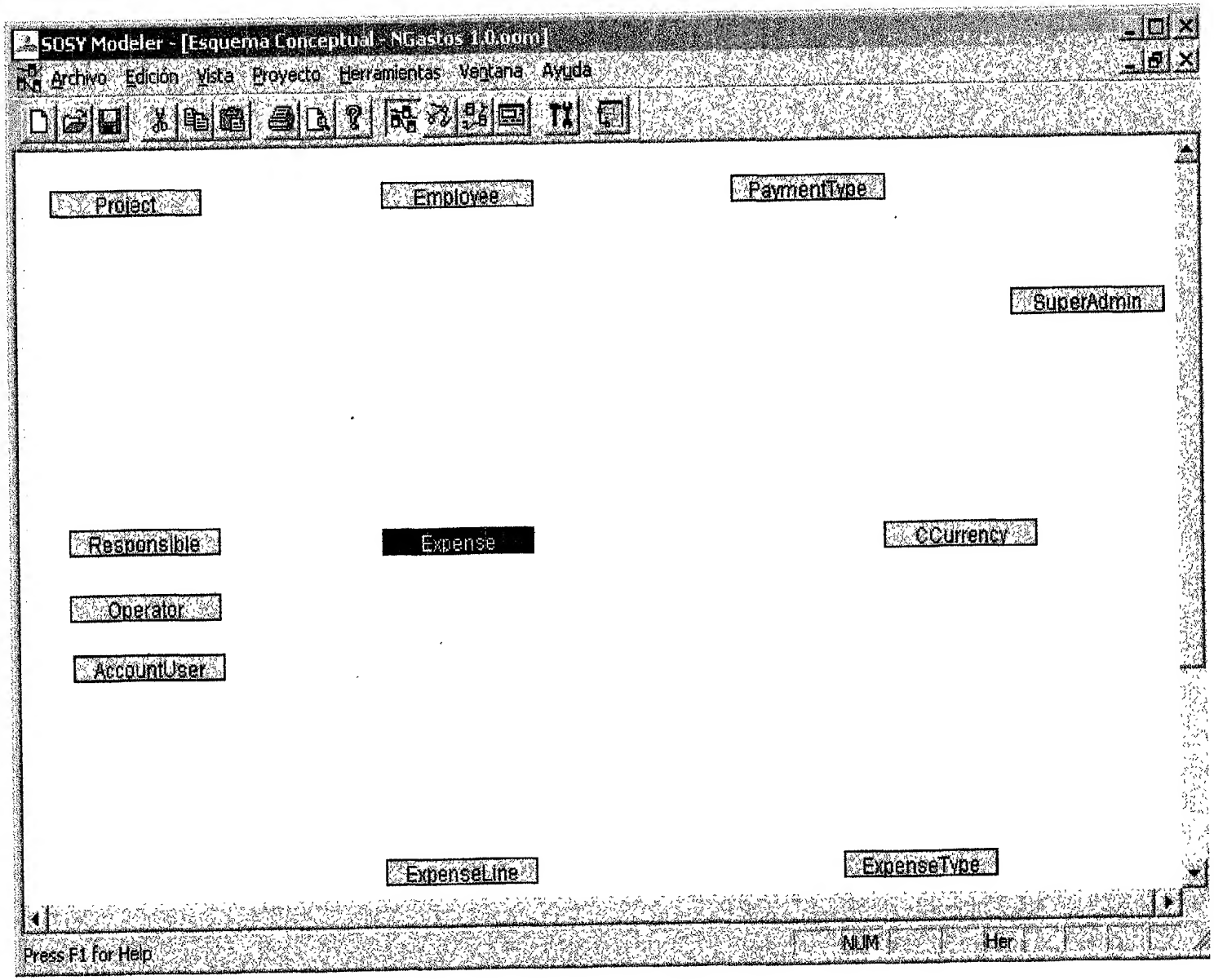
AUTOMATIC SOFTWARE PRODUCTION SYSTEM
INVENTOR: IBORRA AND PASTOR
SERIAL NO. 09/872,333
FILING DATE: 06/01/01
DOCKET NO. CHG-001.3P



CLASS CREATION DIALOG

FIG. 9A

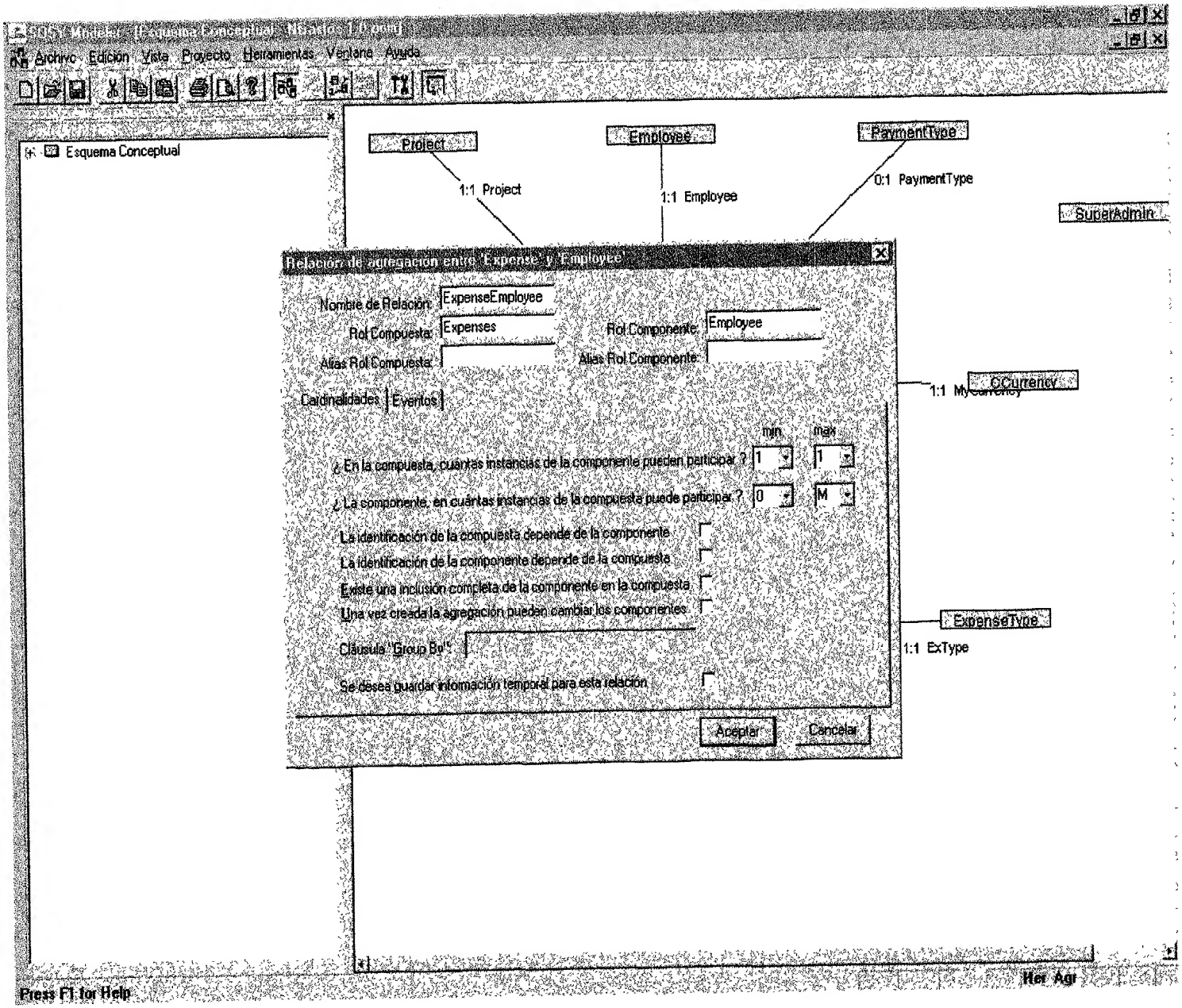
AUTOMATIC SOFTWARE PRODUCTION SYSTEM
INVENTOR: IBORRA AND PASTOR
SERIAL NO. 09/872,333
FILING DATE: 06/01/01
DOCKET NO. CHG-001.3P



ALL CLASSES NEEDED AND CREATED IN EXPENSE MANAGEMENT SYSTEM

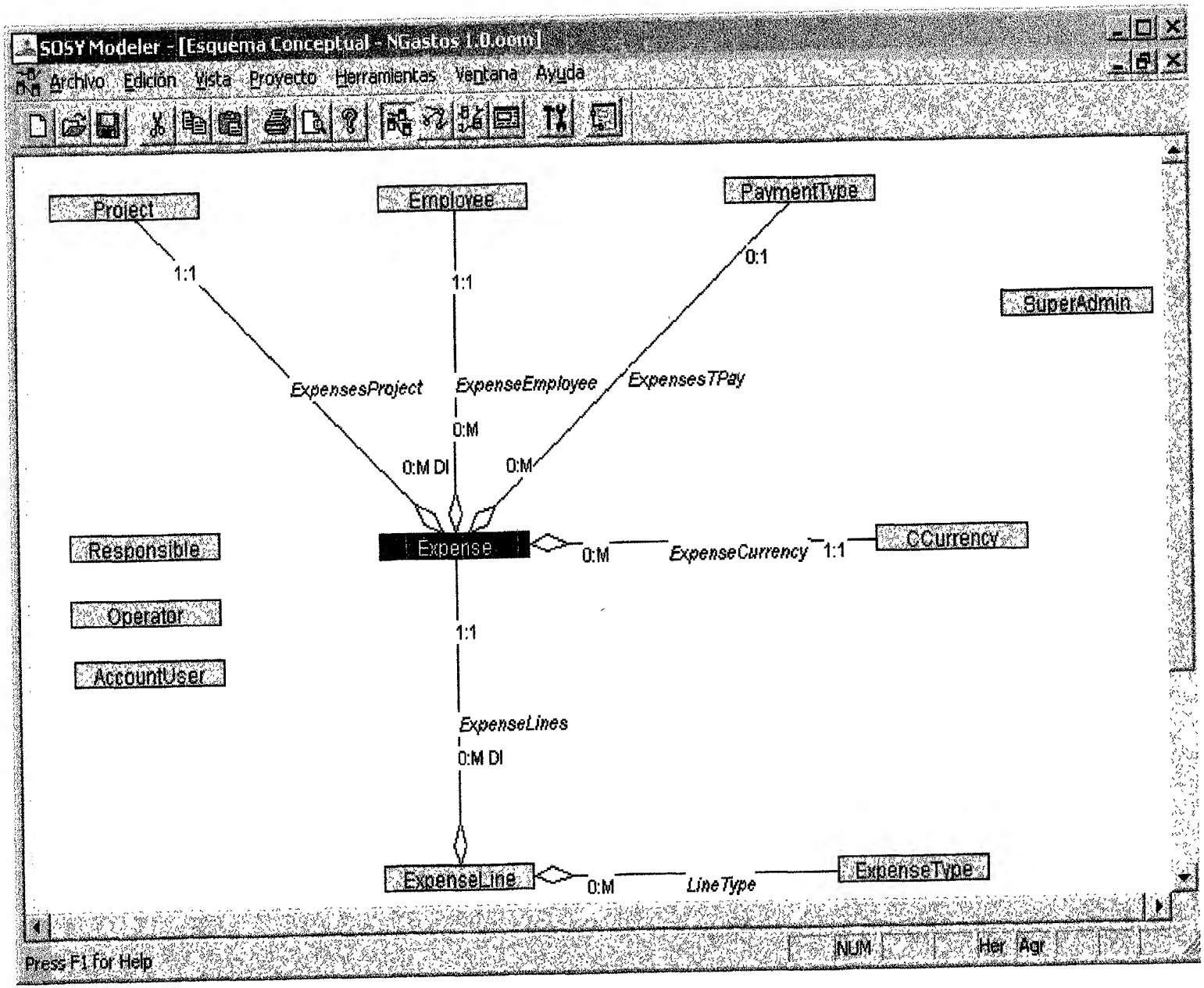
FIG. 9B

AUTOMATIC SOFTWARE PRODUCTION SYSTEM
INVENTOR: IBORRA AND PASTOR
SERIAL NO. 09/872,333
FILING DATE: 06/01/01
DOCKET NO. CHG-001.3P



DIALOG TO CREATE AND MODIFY RELATIONSHIPS BETWEEN CLASSES

FIG. 9C



GRAPHIC DIALOG TO CREATE RELATIONSHIPS BETWEEN CLASSES AND GRAPHICALLY SHOW THE RELATIONSHIPS SO CREATED

FIG. 10

AUTOMATIC SOFTWARE PRODUCTION SYSTEM
INVENTOR: IBORRA AND PASTOR
SERIAL NO. 09/872,333
FILING DATE: 06/01/01
DOCKET NO. CHG-001.3P

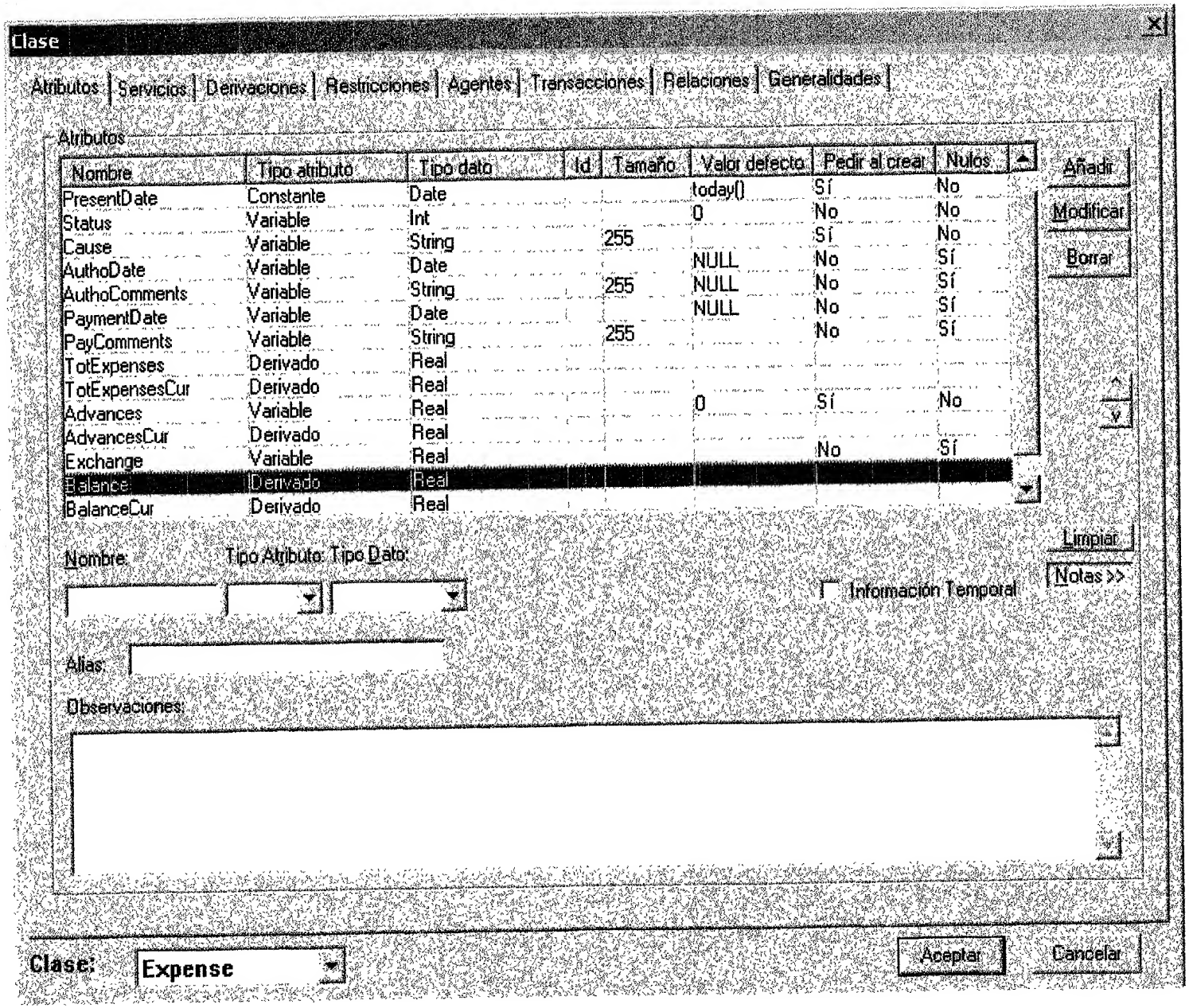


FIG. 11A

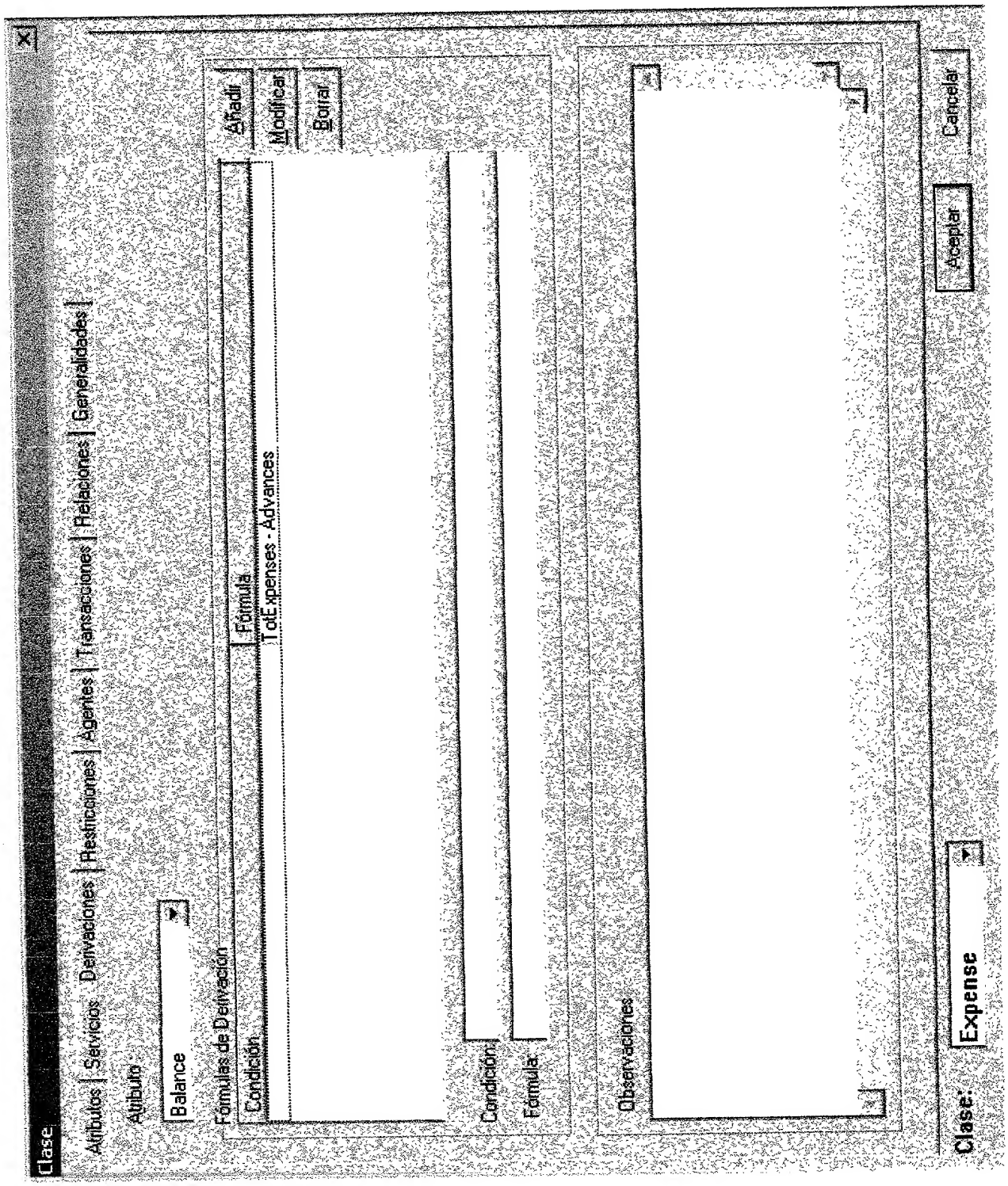
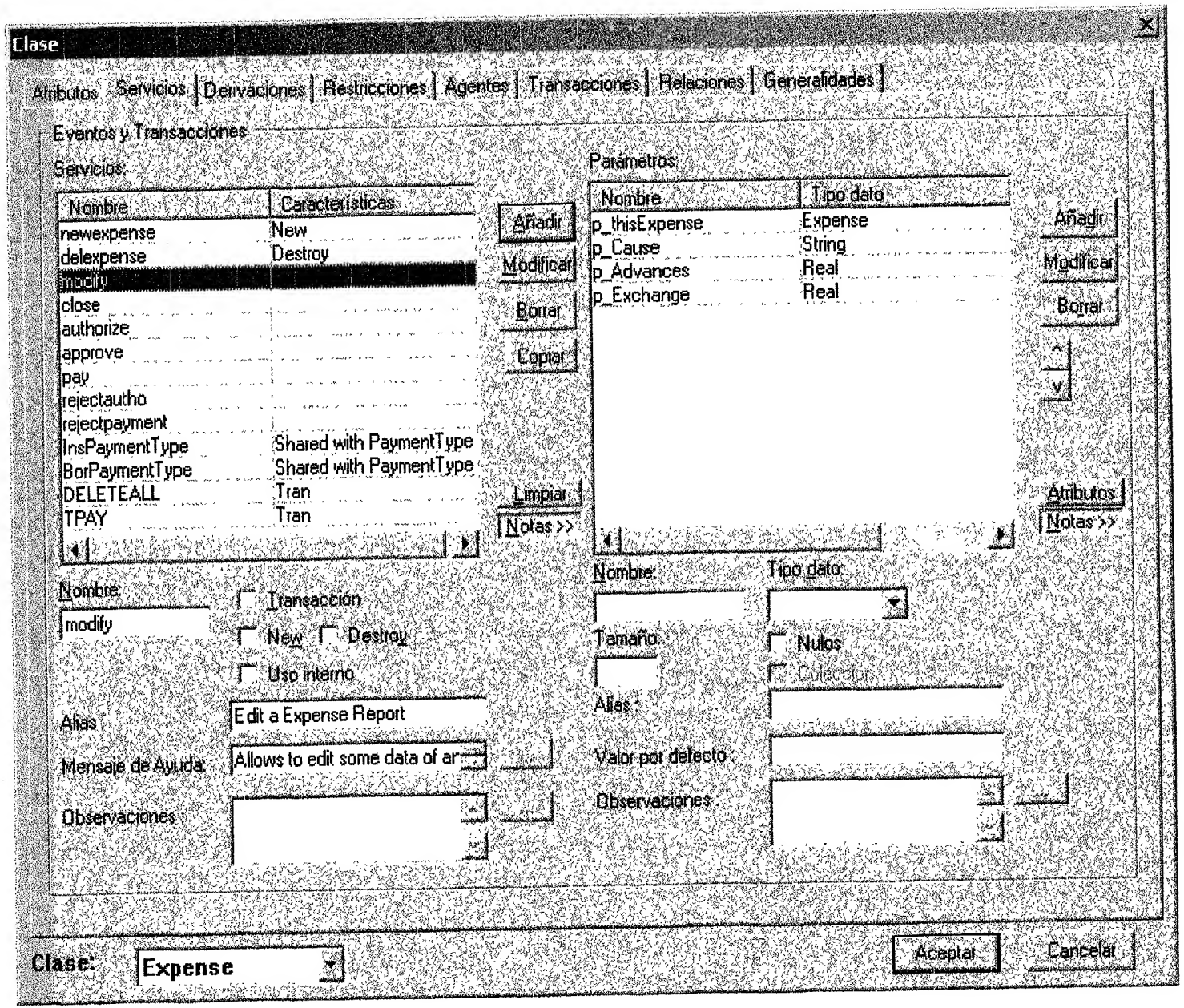

Clase
Atributos
Servicios
Derivaciones
Restricciones
Agentes
Transacciones
Relaciones
Generalidades
Atributo
Balance
Fórmulas de Derivación
Condición
Fórmula
TotExpenses - Advances
Añadir
Modificar
Borrar
Condición:
Fórmula:
Observaciones:
Clase:
Expense
Aceptar
Cancelar

FIG. 11B

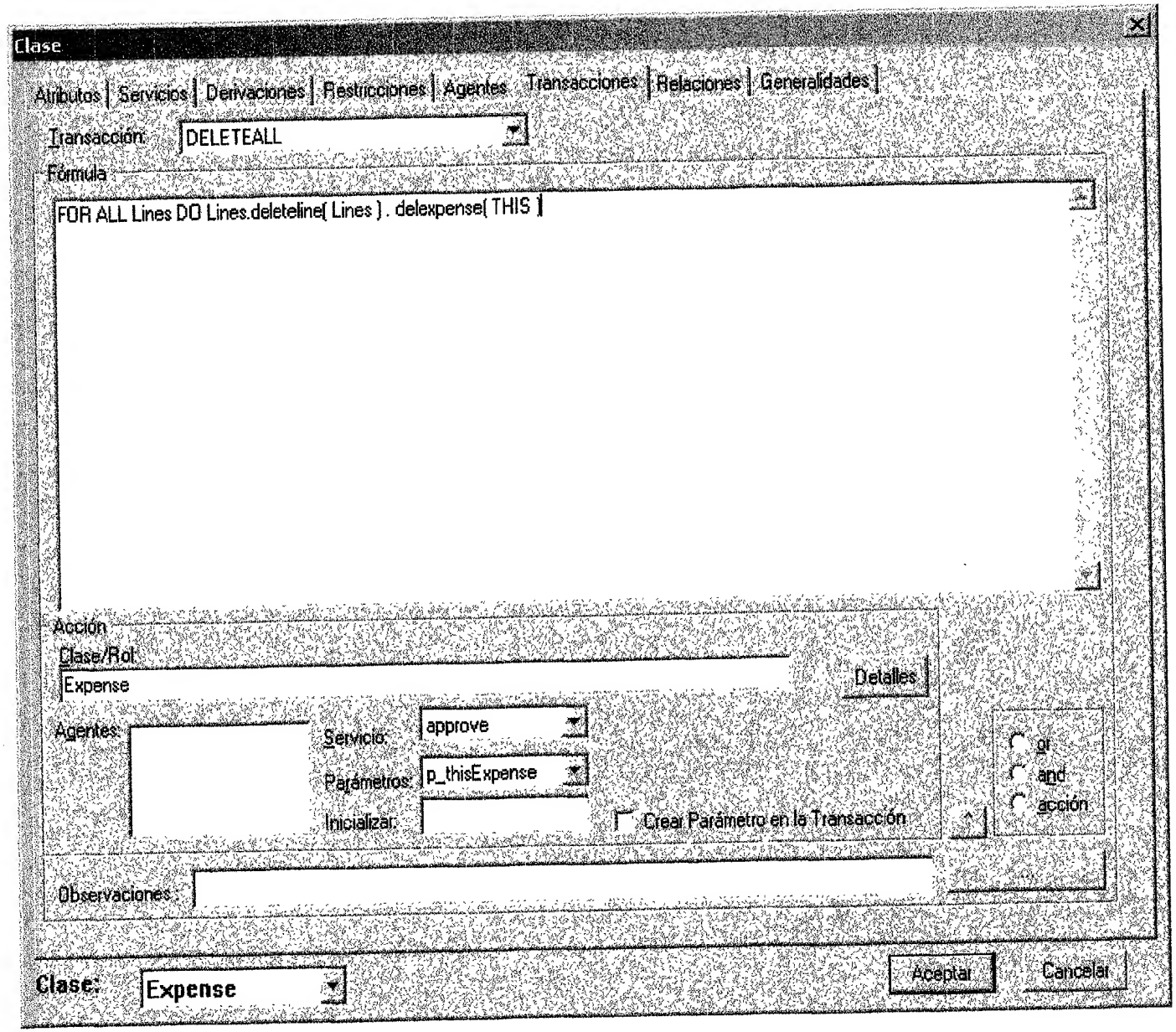
AUTOMATIC SOFTWARE PRODUCTION SYSTEM
INVENTOR: IBORRA AND PASTOR
SERIAL NO. 09/872,333
FILING DATE: 06/01/01
DOCKET NO. CHG-001.3P



SERVICES OF CLASS "EXPENSE"

FIG. 12

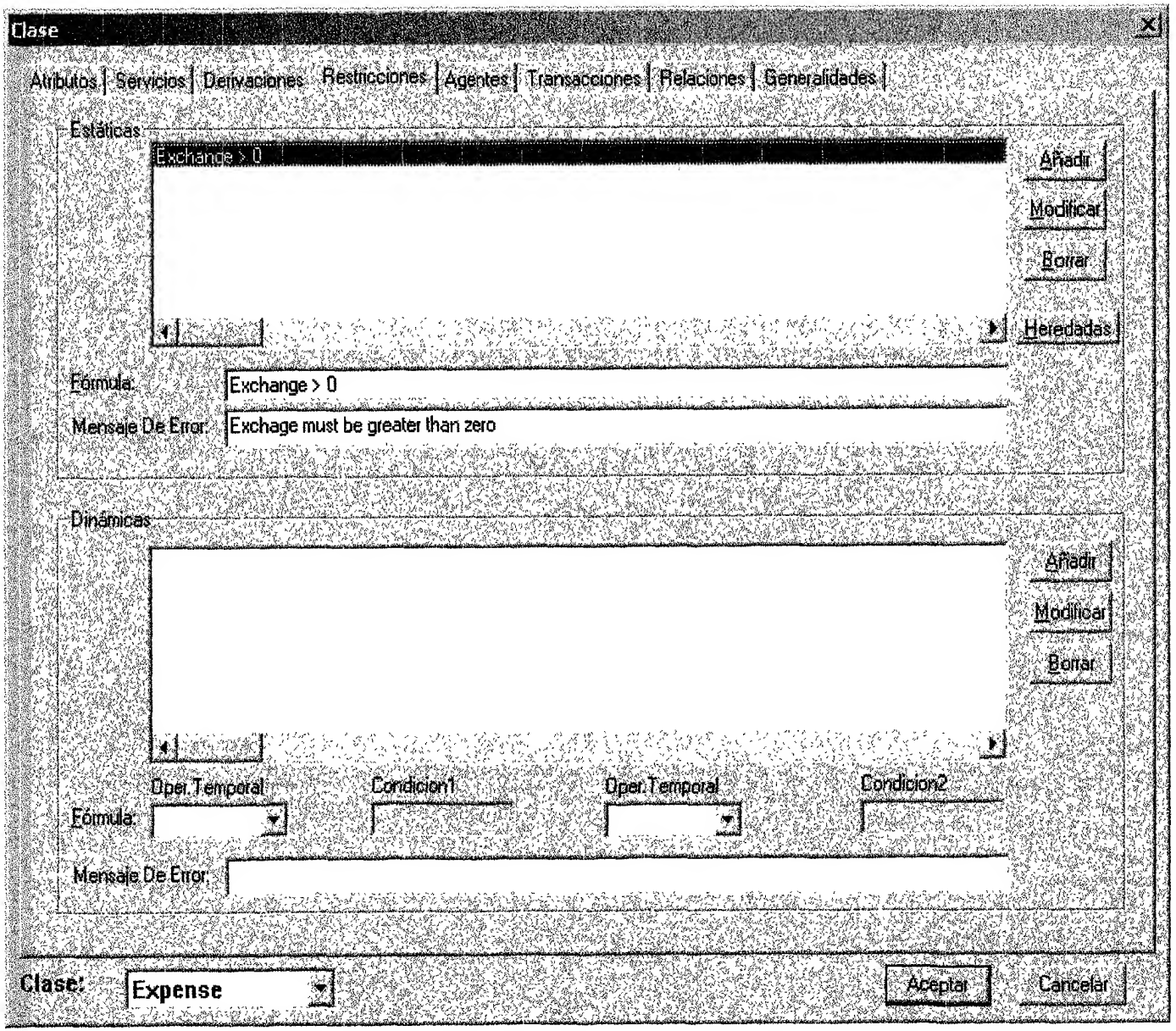
AUTOMATIC SOFTWARE PRODUCTION SYSTEM
INVENTOR: IBORRA AND PASTOR
SERIAL NO. 09/872,333
FILING DATE: 06/01/01
DOCKET NO. CHG-001.3P



DIALOG TO DEFINE FORMULA FOR "DELETEALL" TRANSACTION

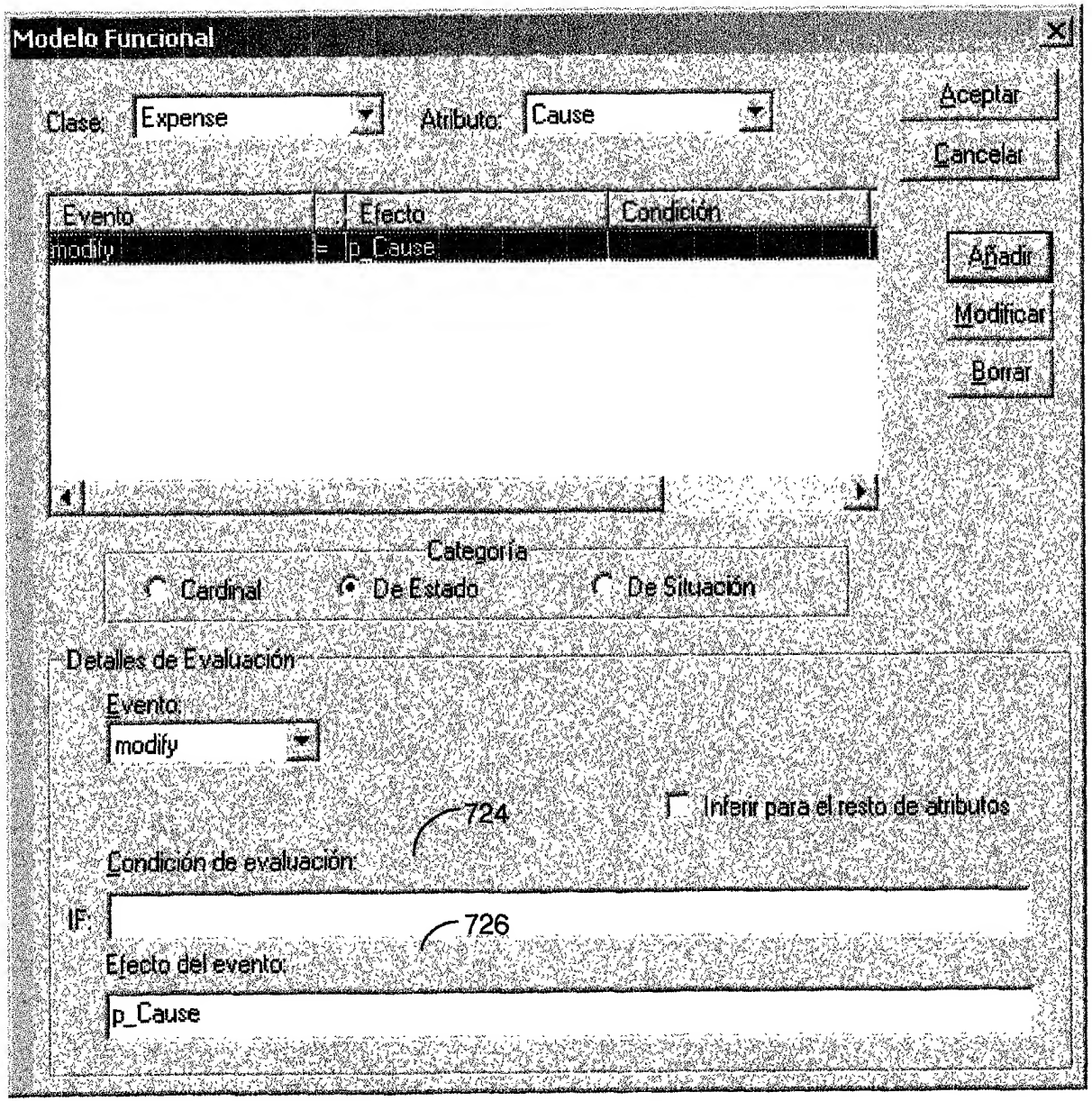
FIG. 13

AUTOMATIC SOFTWARE PRODUCTION SYSTEM
INVENTOR: IBORRA AND PASTOR
SERIAL NO. 09/872,333
FILING DATE: 06/01/01
DOCKET NO. CHG-001.3P



INTEGRITY CONSTRAINTS OF EXPENSE CLASS

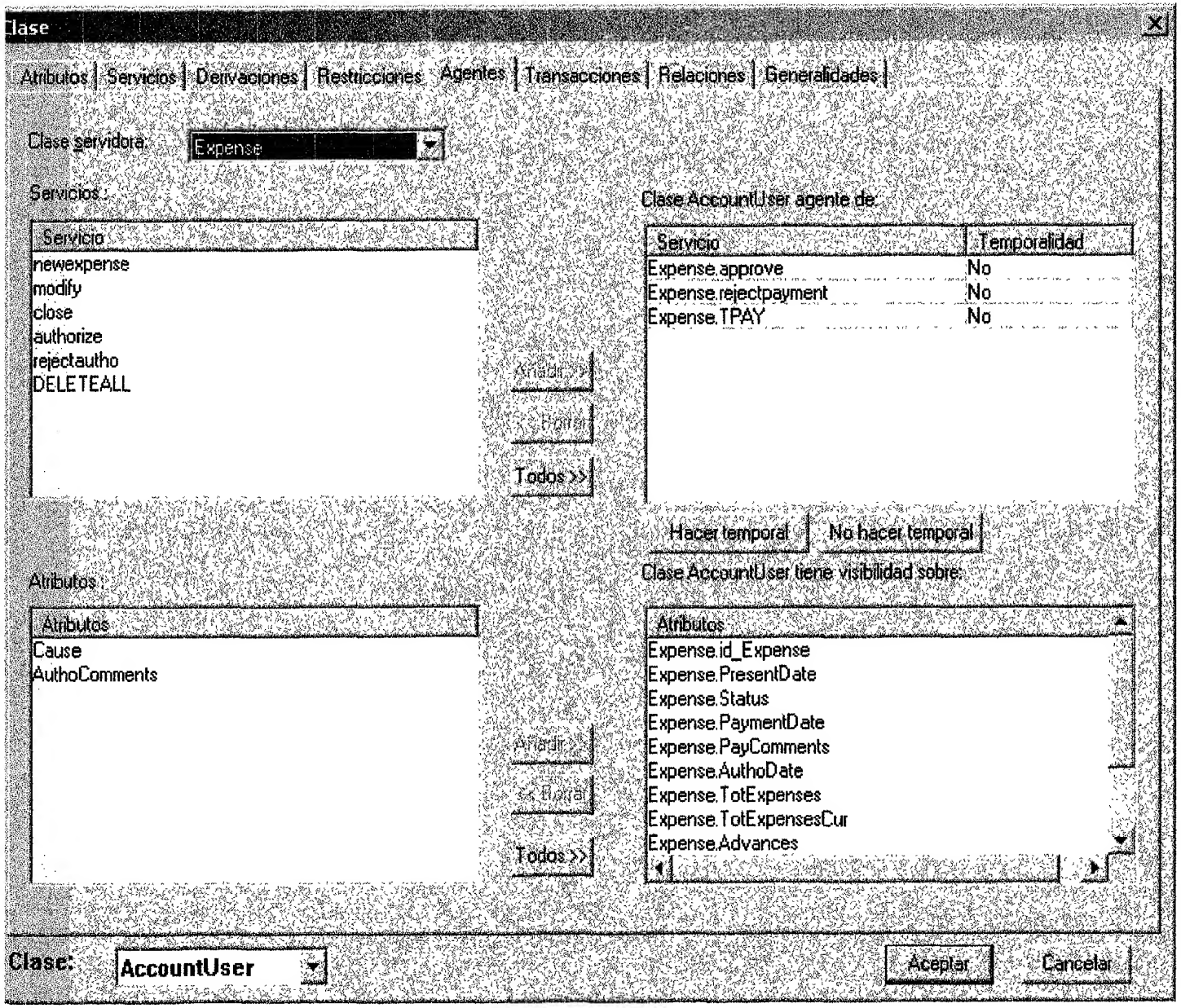
FIG. 14



DIALOG BOX TO CREATE EVALUATION OF "CAUSE" ATTRIBUTE WITH THE "MODIFY" EVENT TO FORM PART OF FUNCTIONAL MODEL

FIG. 15

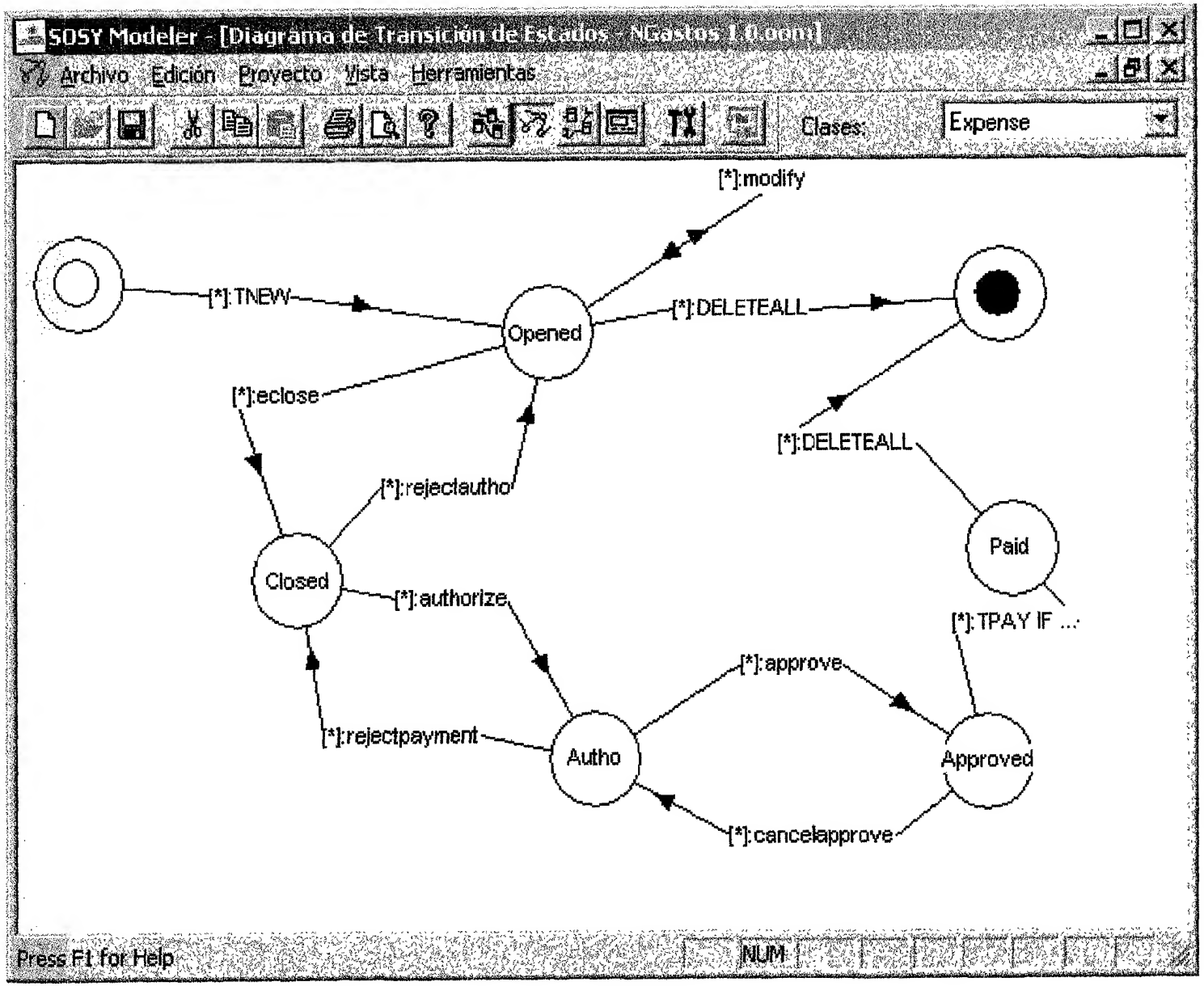
AUTOMATIC SOFTWARE PRODUCTION SYSTEM
INVENTOR: IBORRA AND PASTOR
SERIAL NO. 09/872,333
FILING DATE: 06/01/01
DOCKET NO. CHG-001.3P



AGENT RELATIONSHIP DIALOG THAT CAN BE USED TO SET WHICH SERVICES "ACCOUNT USE" CAN ACCESS AND VISIBILITY OF CLASS ATTRIBUTES FOR THIS USER

FIG. 16

AUTOMATIC SOFTWARE PRODUCTION SYSTEM
INVENTOR: IBORRA AND PASTOR
SERIAL NO. 09/872,333
FILING DATE: 06/01/01
DOCKET NO. CHG-001.3P

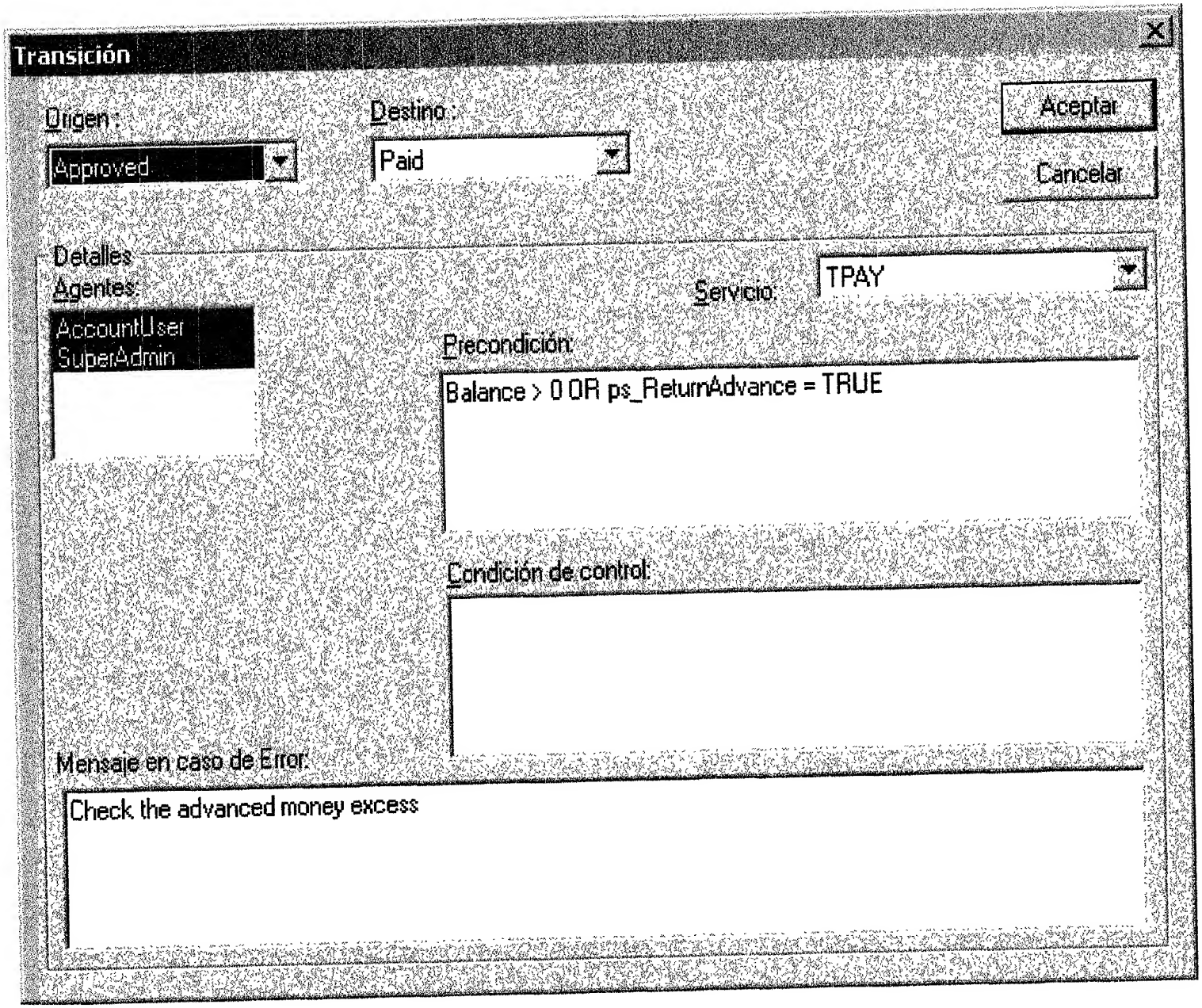


STATE TRANSITION DIAGRAM FOR CLASS "EXPENSE"

FIG. 17

AUTOMATIC SOFTWARE PRODUCTION SYSTEM
INVENTOR: IBORRA AND PASTOR
SERIAL NO. 09/872,333
FILING DATE: 06/01/01
DOCKET NO. CHG-001.3P

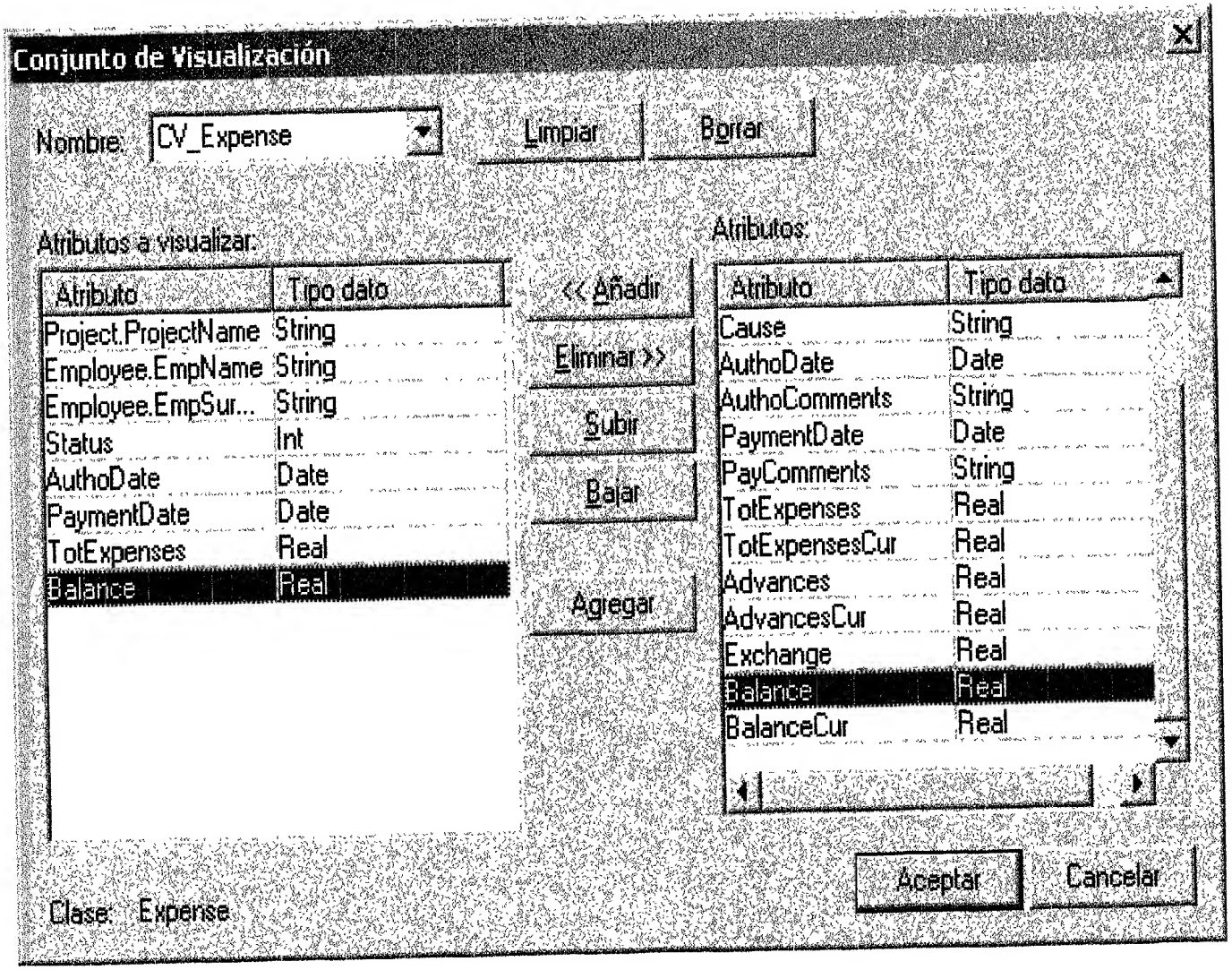
AUTOMATIC SOFTWARE PRODUCTION SYSTEM
INVENTOR: IBORRA AND PASTOR
SERIAL NO. 09/872,333
FILING DATE: 06/01/01
DOCKET NO. CHG-001.3P



DIALOG BOX TO MODEL PRECONDITION

FIG. 18

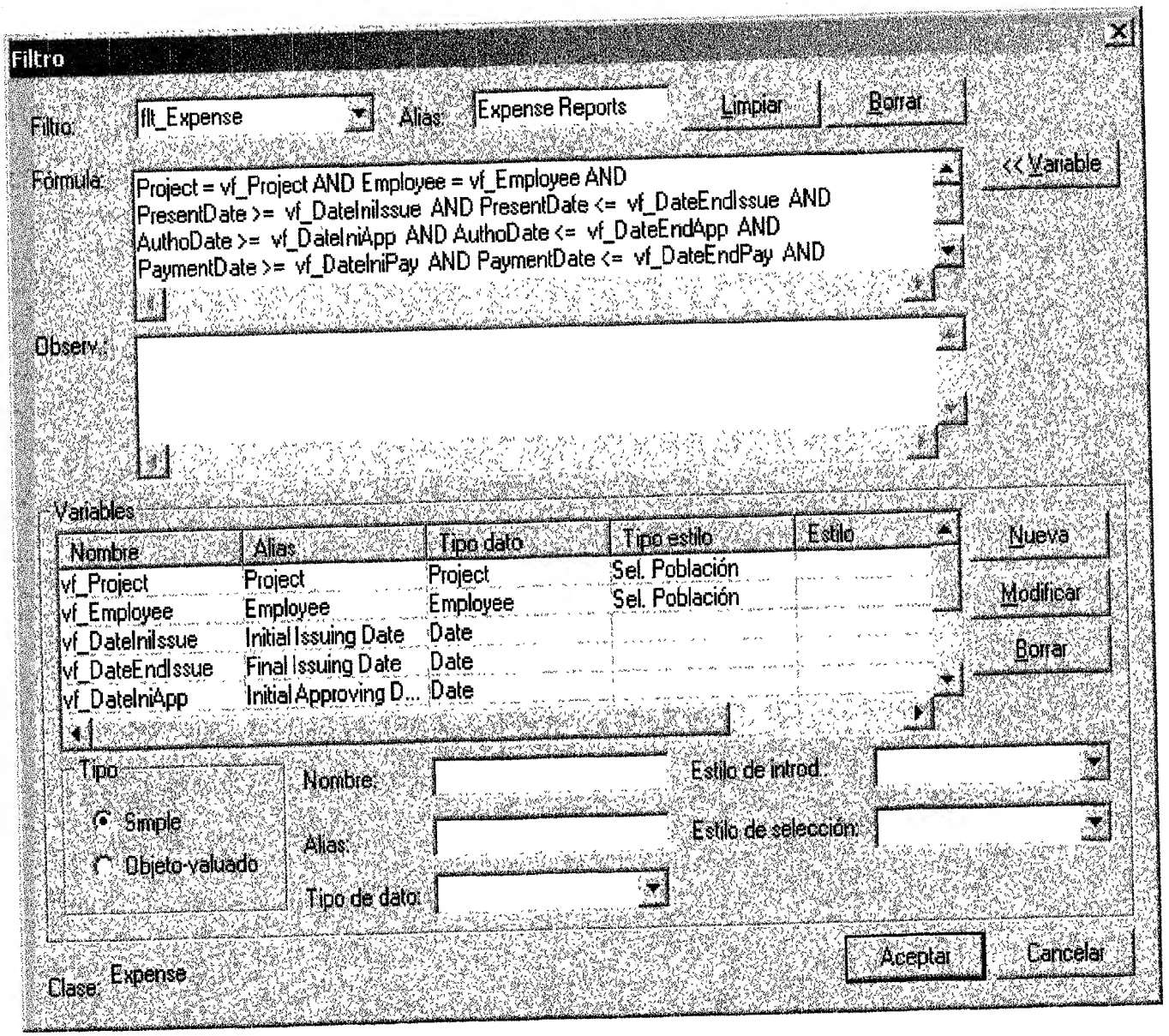
AUTOMATIC SOFTWARE PRODUCTION SYSTEM
INVENTOR: IBORRA AND PASTOR
SERIAL NO. 09/872,333
FILING DATE: 06/01/01
DOCKET NO. CHG-001.3P



DIALOG BOX USED BY SOSY MODELER TO ESTABLISH A SET OF ATTRIBUTES TO BE DISPLAYED FOR THE "EXPENSE" CLASS

FIG. 19

AUTOMATIC SOFTWARE PRODUCTION SYSTEM
INVENTOR: IBORRA AND PASTOR
SERIAL NO. 09/872,333
FILING DATE: 06/01/01
DOCKET NO. CHG-001.3P



DIALOG BOX USED BY SOSY MODELER TO ESTABLISH THE SEARCHING CRITERIA FOR THE EXPENSE CLASS AND TO ESTABLISH THE FILTER FORMULA TO USE AND THE VARIABLES TO REQUEST THE USER TO ENTER

FIG. 20

FLOWCHART OF THE FUNCTIONS THAT ALL SPECIES IN THE DOCUMENTATION GENERATOR TRANSLATOR SUBGENUS WILL PERFORM

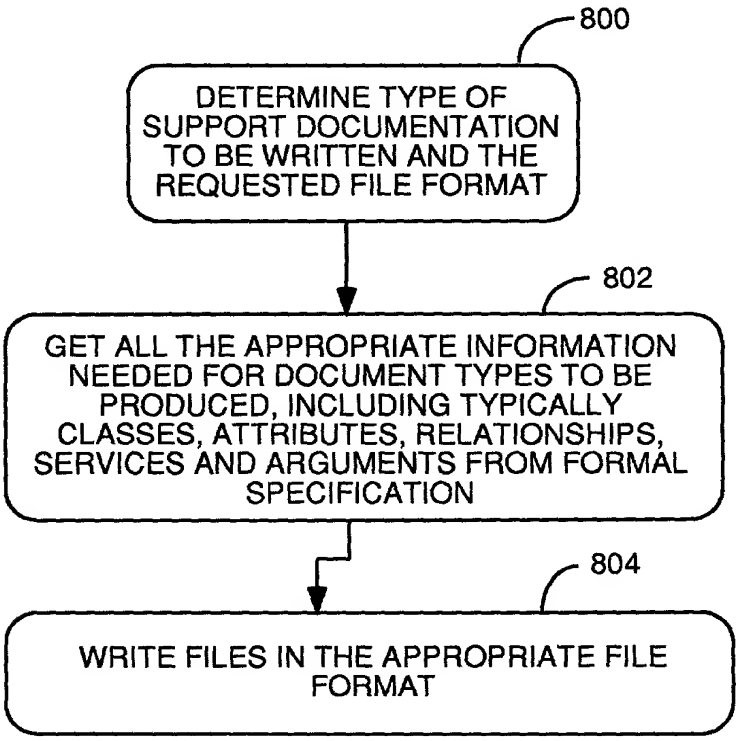


FIG. 21